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REDESCRIPTION OF *EURYPYLUS PETROSUS*
BRADY, 1869, AND A KEY TO THE GENERA OF
SARSIELLIDAE (MYODOCOPINA: OSTRACODA)

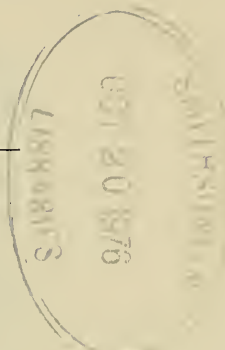
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A single specimen collected from near the Cape Verde Islands was referred by G. S. Brady (1869:141) to a new genus *Eurypylus*, as *E. petrosus*. Because of having only one specimen and not wanting to risk its destruction by opening the shell, Brady did not illustrate the appendages, but only the shell. Later, Brady (1897:94) dissected the specimen and illustrated the mandible and caudal furca, stating, "I thought it well to sacrifice the shell for the sake of examining the contained animal, of which, unfortunately, I succeeded in obtaining fragments only."

Müller (1912:42) and Poulsen (1965:44) referred the species to the genus *Sarsiella* in the belief that the specimen described by Brady was a juvenile. As part of an effort, initiated by a Committee on Recent Ostracoda established at a symposium held in Naples, Italy, in 1963, to redescribe type-species of poorly known genera, we obtained the holotype of *E. petrosus* from the Hancock Museum and redescribe the available appendages herein.

We conclude that *Eurypylus* is a valid genus and assign to it, in addition to *E. petrosus*, *Muelleriella setifera* Poulsen (1965:62) as *Eurypylus setifer* (Poulsen), and *Eusarsiella concentricostata* Hartmann (1974) as *Eurypylus concentricostatus* (Hartmann).



For completeness, the following key to the genera of Sarsiellidae includes a deliberate *nominum nudum*: *Junctichela* (Kornicker, in prep.).

KEY TO GENERA OF SARSIELLIDAE, FOR FEMALES

- | | |
|---|---|
| 1. Furca with only claw 1 united to lamella | 2 |
| Furca with claws 1 and 2 united to lamella | 5 |
| Furca with claws 1, 2, and 4 united to lamella | 7 |
| Furca with claws 1, 2, and 3 united to lamella | <i>Junctichela</i> ^a |
| 2. Furca with 5 claws | 3 |
| Furca with more than 5 claws | 4 |
| 3. First antenna with d-bristle on 8th joint | <i>Sarsiella</i> |
| First antenna without d-bristle on 8th joint | <i>Adelta</i> |
| 4. Claw 3 longer and stouter than claw 4 | <i>Parasarsiella</i> |
| Claw 3 shorter and more slender than claw 4 | <i>Spinacopia</i> , <i>Cymbicopia</i> (part) ^b |
| 5. First antenna with clawlike c-, f-, and g-bristles | <i>Anscottiella</i> |
| First antenna with normal c-, f-, and g-bristles | 6 |
| 6. Endopodite of 2nd antenna with long ventral bristle ... | <i>Cymbicopia</i> |
| Endopodite of 2nd antenna without long ventral bristle ... | <i>Eurypylus</i> |
| 7. First antenna with clawlike f- and g-bristles | <i>Ancohenia</i> ^c |
| First antenna with normal f- and g-bristles | <i>Chelicopia</i> |

^a *Junctichela*, a new genus in manuscript of senior author, includes *Sarsiella similis* Scott, 1905, *Sarsiella gracilis* Scott, 1905, as well as a new species.

^b Furca of juveniles and adult males of *Cymbicopia*, but not *Spinacopia*, with claws 1 and 2 united to lamella.

^c *Ancohenia* (Kornicker, 1976) is monotypic.

Eurypylus Brady, 1869

Type-Species: Eurypylus petrosus Brady, 1869.

Diagnosis of Genus: Carapace of female oval in lateral view, without incisur or rostrum but with small caudal process; surface punctate.

First antenna: Seventh and 8th joints without clawlike bristles.

Second antenna: Endopodite consisting of single joint with 1 or 2 small anterior bristles and either without ventral bristle or with 1 small ventral bristle.

Mandible: Without exopodite.

Furca: Claws 1 and 2 united to lamella and with blunt or pointed tips; remaining claws small, secondary, separated from lamella by suture, and with pointed tips.

Lateral eyes: Present on the 2 known species.

Eurypylus petrosus Brady, 1869

Figure 1

Eurypylus petrosus Brady, 1869:141, pl. 18: figs. 1, 2; 1897:94, pl. 16: figs. 25, 26.

Sarsiella petrosus (Brady).—Müller, 1912:42.—Poulsen, 1965:44.

Holotype: Unique specimen, number B75, Brady Collection, Hancock Museum, Newcastle-on-Tyne, Scotland.

Type-locality: Brady (1897:94) states that the specimen was collected off St. Vincent (Cape Verd); presumably this refers to São Vicente, one of the Cape Verde Islands.

Material: A glass slide from the Hancock Museum containing labels with the following information: "*Eurypylus petrosus* Brady, type, St. Vincent, Cap. Verde, B75." This slide contains some appendages of the holotype: right 1st antenna, right 2nd antenna, both mandibles, one maxilla, proximal remnant of one 7th limb, both lamellae of furca, and one lateral eye. The whereabouts of the remaining limbs is unknown.

Description: The whereabouts of the carapace, if extant, is not known; therefore, Brady's original description (1869:141) translated by the junior author is given below and a tracing of his illustration is shown in Figure 1j, k.

"Shell rounded in lateral view, greatest height three-fourths of the length at about the middle, posterior extremely rounded, upper margin slightly more convex than the lower; clavate in dorsal view, greatest breadth half the length at a little towards the anterior end, with the sides converging towards the rear, anterior rounded and weakly mucronate medially, posterior obtusely acuminate. Surface of the valves ornamented with coarse pits. Length 0.0008."

First antenna (Figure 1a): 2nd joint with 1 dorsal bristle; 3rd and 4th joints fused; each joint with 2 bristles, 1 ventral, 1 dorsal; 5th joint with long sensory bristle; 6th joint with short medial bristle. Seventh joint: a-bristle longer than bristle of 6th joint; b-bristle faint, about twice length of a-bristle; c-bristle about same length as sensory bristle of 5th joint. Eighth joint: d- and e-bristles long, bare, with blunt tips; f- and g-bristles long, slightly shorter than c-bristle. (Filaments not observed on bristles, but this could be due to condition of appendage.)

Second antenna: Protopodite bare; exopodite with 9 joints; joints 2-8 with natatory bristles; 9th joint with 2 bristles, 1 long, 1 short. Endopodite (Figure 1b) 1-jointed with 1 short, proximal, anterior bristle; ventral margin with small node.

Mandible (Figure 1c): Neither endite nor ventral spines or hairs observed on coxale, but this could be because of condition of limb.

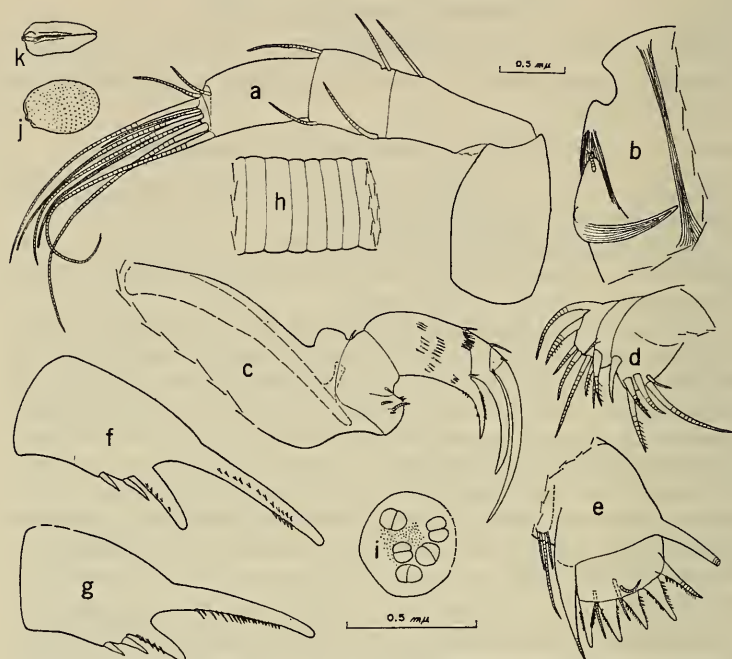


FIG. 1. *Eurypylus petrosus* Brady, Holotype: a, Right 1st antenna, medial view; b, Endopodite of right 2nd antenna, medial view; c, Left mandible, medial view; d, Endites I-III of maxilla, medial view; e, Exopodite and endopodite of maxilla, medial view; h, Fragment of 7th limb; f, g, Lateral view of right furcal lamella, and medial view of left furcal lamella; i, Lateral eye; j, k, Lateral and dorsal or ventral view of carapace, traced from Brady (1869, plate 8, figs. 1, 2), length of carapace given by Brady (page 141) 0.0008. (Same magnification in μm : a, c-g; b, h, i, j, k.)

Basale: Medial side near ventral margin with 4 small bristles; ventral margin with 2 short bristles; dorsal margin with 1 subterminal bristle. Endopodite: Main claw of 1st joint with minute teeth along both margins; medial surface of joint with spines, and with 1 minute bristle near main claw; dorsal margin of joint with small terminal bristle; 2nd joint with bare main claw and small terminal bristle on dorsal margin; 3rd joint with terminal claw and 2 minute bristles, one on each side of base of claw. Exopodite lacking.

Maxilla (Figure 1d, e): Endite I with 6 bristles; endite II with 4 bristles; endite III with 5 bristles; bristle on anterior margin of coxale not observed; exopodite with 3 bristles, 1 long, 2 short. Endopodite:

1st joint with alpha- and beta-bristles; 2nd joint with 2 short a-bristles, 1 small c-bristle, and usual 5 stout, pectinate, end bristles.

Fifth and sixth limbs: Not observed.

Seventh limb: Only proximal segment present on slide (Fig. 1h).

Furca (Fig. 1f, g): Each limb with 4 claws; claws 1 and 2 stout with rounded tips, with teeth along posterior margins, and not separated from lamella by suture; claws 3 and 4 small, secondary, separated from lamella by suture.

Lateral eye: Pigmented, with 5 divided ommatidia (Fig. 1i).

Medial eye and rod-shaped organ: Not observed.

Sex and maturity of holotype: The sex and stage of development of the holotype is unknown. The presence of a small fragment of 7th limb indicates that the specimen is probably a female, because for most species, males have, at most, vestigial 7th limbs. The absence on the slide of 5th limbs, which are well-developed even in early instars, suggests to us that the absence on the slide of the 6th and complete 7th limbs is the result of their having been lost rather than having been absent on the animal. The specimen could be a juvenile as already suggested by Müller (1912:42) and Poulsen (1965:44), but we must leave the maturity of the specimen open, until additional specimens are available for comparison. Even if the specimen is a juvenile, we believe that the appendages are sufficiently different from juveniles of other sarsiellids to warrant the retention of the genus.

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